

## 13

Thereafter, referring to FIG. 13(c), if the first display module 151a is folded again and then unfolded, the third operating-mode screen 585 may be displayed on the first display module 151a, and a fourth operating-mode screen 595 may be displayed on the second display module 151b.

In this manner, it is possible to switch from one operating mode to another operating mode. For example, when a phone-book menu is chosen, it is possible to sequentially display a universal search screen, a group search screen, an alphabet search screen, a photo search screen and a universal search screen. In addition, it is possible to switch from an emoticon-input mode to a character-input mode.

FIG. 14 illustrates a diagram for explaining an integrated-operating mode. In the integrated-operating mode, the first and second display modules 151a and 151b may operate as a single display module. Thus, in the integrated-operating mode, a plurality of menu items may be displayed on the first and second display modules 151a and 151b by treating first and second display modules 151a and 151b as a single display module, as shown in FIG. 14. Since the menu items displayed on the first display module 151a cannot be chosen by being touched, they need to be moved to the second display module 151b which can receive a touch input.

FIGS. 15 and 16 illustrate diagrams showing how to move a menu item displayed on the first display module 151a to the second display module 151b. Referring to FIGS. 15(a) and 15(b), if a touch-and-drag input 605 is detected from the second display module 151b, an operating screen 600 may be scrolled accordingly. If the operating screen 600 is scrolled to the extent that a menu item desired by the user can be displayed on the second display module 151b in operating screen 610, the desired menu item may be executed by being touched, as indicated by reference numeral 615.

Referring to FIGS. 16(a) and 16(b), if the first display module 151a is bent or folded or folded or a touch-and-drag input 655 is detected from the second display module 151b when an operating screen 650 including an operation control menu (651 and 653) is displayed on the first display module 151a, the operating screen 650 may be scrolled down and may thus be displayed on the second display module 151b. Then, the operation control menu (651 and 653) of the operating screen 665 may be executed in response to a touch input 657. Referring to FIGS. 16(c), if no operation is performed within a predetermined amount of time after scrolling down the operating screen 650, the operating screen 665 may be scrolled back up to its original position.

FIG. 17 illustrates diagrams showing how to switch from a separate-operating mode to an integrated-operating mode. Referring to FIGS. 17(a) and 17(b), if the first display module 151a is bent or folded during an integrated-operating mode 700, the mobile terminal 100 may be switched to a separate-operating mode 710. Likewise, if the first display module 151a is bent or folded during the separate-operating mode 710, the mobile terminal 100 may be switched to the integrated-operating mode 700.

As described above, it is possible to effectively control various operations performed by a mobile terminal according to whether a flexible first display module of the mobile terminal is bent or folded.

The mobile terminal according to the present invention and the method of controlling the mobile terminal according to the present invention are not restricted to the exemplary embodiments set forth herein. Therefore, variations and combinations of the exemplary embodiments set forth herein may fall within the scope of the present invention.

The present invention can be realized as code that can be read by a processor (such as a mobile station modem (MSM))

## 14

included in a mobile terminal and that can be written on a computer-readable recording medium. The computer-readable recording medium may be any type of recording device in which data is stored in a computer-readable manner.

Examples of the computer-readable recording medium include a ROM, a RAM, a CD-ROM, a magnetic tape, a floppy disc, an optical data storage, and a carrier wave (e.g., data transmission through the internet). The computer-readable recording medium can be distributed over a plurality of computer systems connected to a network so that computer-readable code is written thereto and executed therefrom in a decentralized manner. Functional programs, code, and code segments needed for realizing the present invention can be easily construed by one of ordinary skill in the art.

As described above, according to the present invention, it is possible to effectively control various operations performed by a mobile terminal according to whether a flexible display of the mobile terminal is bent or folded. Therefore, it is possible to facilitate the manipulation of a mobile terminal and thus to improve user convenience simply by bending or folding a flexible display, instead of using existing data input/output methods.

While the present invention has been particularly shown and described with reference to exemplary embodiments thereof, it will be understood by those of ordinary skill in the art that various changes in form and details may be made therein without departing from the spirit and scope of the present invention as defined by the following claims.

What is claimed is:

1. A method of controlling a mobile terminal equipped with a flexible first display module and a second display module capable of receiving a touch input, the method comprising:
  - displaying an operating screen on the first display module;
  - displaying an operation control menu including a plurality of menu items on the second display module, the operation control menu being a menu for controlling the operating screen;
  - determining, by the mobile terminal, which portion of the first display module is bent or folded while displaying the operating screen and the operating control menu;
  - choosing, by the mobile terminal, one of the plurality of menu items of the operation control menu corresponding to the determined bent or folded portion of the first display module; and
  - performing, by the mobile terminal, an operation corresponding to the chosen menu item and applying a result of the performed operation to the operation screen of the first display module,
 wherein the first and second display modules are independently driven,
- the method further comprising switching an operation mode of the mobile terminal if a predetermined portion of the first display module is bent or folded, the operation mode comprising a separate-operating mode and an integrated-operating mode.
2. The method of claim 1, wherein the step of performing the operation comprises:
  - performing the operation corresponding to the chosen menu item after the one of the plurality of menu items is chosen.
3. The method of claim 1, wherein the step of performing the operation comprises:
  - displaying an inquiry message;
  - receiving a reply to the inquiry message from a user; and
  - deciding whether or not to perform the operation corresponding to the chosen menu item according to the reply to the inquiry message.